WESTERN REGION ENVIRONMENTAL NEWSLETTER

WESTERN REGIONAL ENVIRONMENTAL OFFICE

US ARMY ENVIRONMENTAL CENTER

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Standard Federal Regions 8, 9 and 10

State and Federal Collaboration To Enhance Natural Resources

In This Issue ...

FROM THE EDITOR

THE NATURAL RESOURCES LEADERSHIP COUNCIL OF THE STATES

Jerry Owens
Chief, WREO

Introduction

Managing the nation's land, water and wildlife resources has never been more complex, more controversial or more important. Issues such as recovering endangered species, cleaning up blighted and polluted areas, restoring watersheds, protecting open space and providing recreation areas require increasingly innovative partnerships. State agencies charged with natural resources and recreation management have not, in the past, had a centralized voice for communicating with Congress and with federal land management agencies, or even for talking to each other – until now.

In October 2001, the chief executives of 45 state natural resources agencies gathered for the first time since President Theodore Roosevelt's administration to discuss common interests, challenges and opportunities to work more collaboratively among themselves and with federal agencies. Led by a steering committee of eight state resources secretaries and three former state leaders, participants in this groundbreaking Natural Resources Leadership Summit came together to discuss common interests. The gathering focused on stewardship and management of public lands; funding for land and water conservation; innovative partnerships and multi-state collaboration; and opportunities for formally organizing state natural resources leaders.

Secretary of the Interior Gale Norton hosted and keynoted the summit. Along with the 45 state leaders, the summit included National Park Service Director Fran Mainella, U.S. Fish and Wildlife Service Director Steve Williams, and

In October 2001, the chief executives of 45 state natural resources agencies gathered for the first time since President Theodore Roosevelt's administration ....

Jim Connaughton, Chairman of the White House Council on Environmental Quality. Logistic details were arranged by The Conservation Fund, creating a lasting partnership between the states and the non-profit sector. The Richard King Mellon Foundation underwrote the summit's costs, demonstrating also that private conservation foundations clearly understand the need for better collaboration between state and federal agencies.

The most significant result of the summit was the agreement among states to explore ways to create a new state-led association representing natural resources issues. A strong commitment to continue this effort, and to meet again, led to a more permanent conclusion.

Recent Events

Building on the momentum of this historic first gathering, state resources leaders reconvened at a second Natural Resources Leadership Summit in April 2002. The state leaders joined with high-ranking officials of key federal agencies to discuss opportunities to work more collaboratively.

At this second meeting, the state leaders unanimously approved an organizational plan to establish the Natural Resources Leadership Council of the States (NRLCS), created

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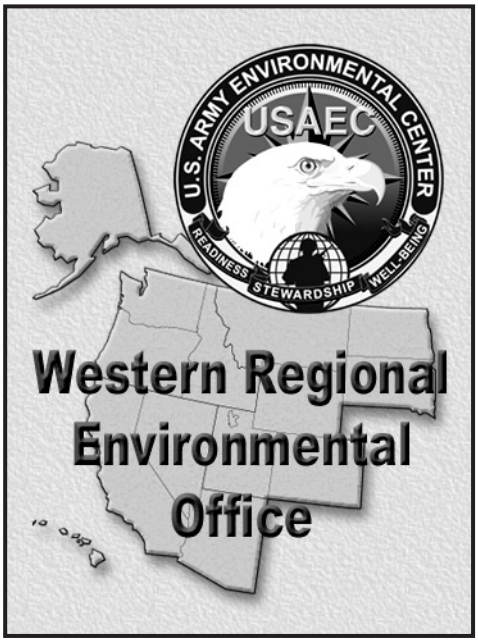

and approved bylaws, and elected an Executive Committee. The Executive Committee consists of four elected officers – president, vice president, secretary/treasurer, and past president – and representatives from the eight geographic regions. The National Governors Association officially sanctioned the new organization in June, the final step in its creation.

The NRLCS is currently moving through the process of becoming an IRS tax-exempt non-profit organization (501(c)3).

The Need

The primary role of the NRLCS is to represent the collective voice of the states to Congress, federal agencies and the public on natural resources issues.

Good examples of multi-state and state-federal collaboration are found all over the country. Programs like the Upper Colorado River Endangered Fish Recovery Program help the federal government work with state and local governments, nonprofits and water users to benefit natural resources. Brownfield redevelopment projects in urban centers across the country showcase the benefits of such cooperation. Other examples range from wildlife conservation projects to forest health restoration efforts throughout the nation. From Pennsylvania's "Growing Greener" program and Maryland's Chesapeake Bay restoration, to California's Salton Sea and San Antonio's River Walk, federal-state-local partnerships are crucial to conservation throughout America.

The benefits of the states having a centralized voice to talk to federal agencies will be realized in myriad ways, such as state support for federal programs like the Land and Water Conservation Fund. Perhaps more important, federal agencies can utilize NRLCS as a one-stop shop in seeking state involvement and partnership in important initiatives. And, a regularly scheduled conversation among the states themselves is the most effective way to learn from each other, duplicate what's working, avoid each other's mistakes and share ideas with other partners.

The importance and timeliness of this new state executive branch association was clearly evident in the keynote remarks and early commitment of Secretary of the Interior Gale Norton, and in the unanimous agreement of the states to focus their collective voice through a new association. As the Bush Administration seeks a new dialogue with the states and a new agenda developed by the states that reflects their mutual priorities, the NRLCS offers a compelling forum for private sector organizations to work directly with state leaders.

The NRLCS is an important organization that was "chartered" by the National Governors Association. Composed of the heads of state conservation agencies, the council is a bipartisan organization aimed at building partnerships between the states and the federal government regarding natural resources. To build a good working relationship with NRLCS, the Western Regional Environmental Office (WREO) met with the newly elected council president, who is from Colorado. He requested WREO help coordinating a high-level speaker from the Defense Department to address encroachment at a plenary session of the council's spring meeting (March 28 - 30) in Virginia. He is also interested in visiting local training areas to see firsthand some of the natural resources initiatives being accomplished by the Army.

GETTING UP TO SPEED ON UXO CLEANUP

Curt Williams
Project Manager, Contributing Editor

Today there are over 2,000 ordnance and explosives (OE) and unexploded ordnance (UXO) sites in existence across the United States, with more sites still being identified, within the 25 million acres of federal property. With base realignment and closure actions continuing to increase, UXO basic and advanced training remains in demand and continues to attract maximum class attendance each time this type of detailed training is offered. Individuals from military installations, facilities and bases who are now or will soon become involved with ordnance cleanup, can benefit tremendously by attending this training. It is estimated that cleanup costs associated with UXO sites may range up to $100 billion. Because significant differences exist between OE/UXO cleanup efforts and traditional environmental contamination; sites vary due to size, topography, vegetation, terrain features and geology; and OE/UXO non-operational ranges at times cross regulatory cleanup programs (base realignment and closure, installation restoration program, formerly used defense sites, national priorities list), a high demand exists to offer state-of-the-art training to those involved in cleanup actions.

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DEVELOPING CLEARANCE PRIORITIES UTILIZING PUBLIC INPUT

FORMER LOWRY BOMBING & GUNNERY RANGE, COLORADO

Extracted From a Report Written By:
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INTRODUCTION

The regulations pertaining to ordnance and explosives (OE) response projects state: "Public participation is an integral component of the OE response process." They go on to say, "The U.S. Army Corps of Engineers (USACE) is committed to providing public participation activities during OE response projects." Why? First, to keep the surrounding community informed, in a timely manner, of OE actions being conducted at the site. Second, to provide the public with an opportunity to review and comment on studies being conducted and suggested response alternatives and decisions. Finally, to foster and maintain a climate of understanding and establish a working level of trust between the public and USACE.

To facilitate these requirements, USACE prepared community relations plans, established administrative records and restoration advisory boards (RABs), and even provided technical assistance for public participation contractors to the RAB. By doing all this, USACE certainly met the requirements spelled out in the regulations, right?

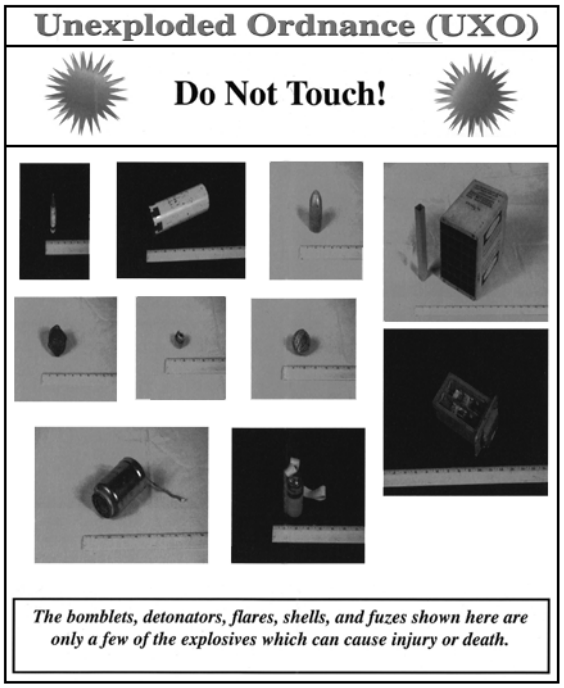
Ask the public whether the requirements have been met effectively. Most likely, you'll receive an array of answers ranging from "absolutely yes" to "heck no!"

Why the variation when the answer seems so clear? While USACE works hard to maximize participation on projects, they could do more to gain public trust and establish a sense of public ownership. The purpose of this paper is to present a process for obtaining public support for the development of clearance priorities. This process was developed by the authors and successfully implemented at the Former Lowry Bombing and Gunnery Range (FLBGR), Colo.

U.S. Army Corps of Engineers

PROJECT BACKGROUND

The FLBGR, formerly known as Buckley Field, is located in Arapahoe County, Colo., approximately 20 miles southeast of Denver, adjacent to Aurora, Colo. The range encompasses approximately 100 square miles. The FLBGR was originally established on land acquired from the City and County of Denver in 1937. The range opened in 1942 as an Army airfield and was part of the Army Air Corp's Western Technical Training Command during World War II. Both inert and high-explosive (HE) bombs were used at the site, and a number of fixed and flexible gunnery targets were used as well. From 1942 to 1963, numerous tenants, including the Air Force, Army, Navy, and Air National Guard, used the range for various training exercises. The range also supported training exercises during the Korean and Vietnam wars. From 1960 to 1980, the extent of the range was either sold or transferred to other nonfederal parties.



LAND USE

Current land use at the range varies from grazing and farming to recreational, housing and commercial uses. Due to the rapid development and growth of the areas surrounding the range, it is anticipated that the future land use of the range will be predominantly residential, commercial and recreational.

OE RESPONSE ACTIVITIES VS. DEVELOPMENT OF THE RANGE

There are currently 12 known areas of concern (AOCs) at the site requiring clearance activities, consisting of seven bombing targets and five ranges. The current base line schedule for the project is 10 years (2011) and is dependent upon out-year funding projections for the formerly used defense sites (FUDS) program. It is highly possible that the actual schedule will be longer. This does not, however, accommodate the rapid growth occurring at the FLBGR and thus will cause overlap between the development of the range and the clearance of the 12 AOCs. This situation is of great concern to the public, the Colorado Department of Public Health and Environment (CDPHE) and USACE, as it increases the exposure of the public to potential OE hazards.

Colorado Department of Public Health and Environment

STAKEHOLDERS

As one can imagine, an area the size of the FLBGR (100 square miles) adjacent to a large metropolitan area has many owners and interested stakeholders. The FLBGR stakeholders include local governments, commercial industries, residential communities, commercial and residential developers, recreational facilities, and farmers and ranchers. While all the stakeholders share the same goal for the project – making the former range area safe – they all have different priorities based on their individual interests.

PRIORITIES – WHERE TO START?

As with most large projects, resources do not allow for the initiation of clearance activities at all AOCs simultaneously. So the question becomes, where do you start? The obvious starting point is to address any known, immediate threats to the health and safety of the public. At the FLBGR, this was done by performing surface clearances at all of the known AOCs. Therefore, having addressed the primary concern of USACE, the CDPHE and the public, the question then became, what is our next priority? Should we:

a) Clear areas close to existing recreational, residential and commercial areas?

b) Clear areas where commercial, residential or recreational development is scheduled to begin soon?

c) Clear the areas with the best access?

d) Clear the smaller AOCs that can be finished quickly with available funding, rather than taking a year or two to do the larger areas?

e) Ignore the physical location of the AOCs and clear the area where we know the most hazardous items will be found?

Perhaps the answer is a combination of the above. The next question is, who should truly be involved in determining these priorities?

a) Is it the Corps of Engineers? They are the experts performing the removals.

b) Should CDPHE have the deciding voice? It's their job to look out for the health and safety of the people of Colorado.

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'GREEN BUILDING' OPENS DOORS AS TRAINING FACILITY AT FT. CARSON

Scott Clark
Fort Carson Directorate of Environmental Compliance and Management

Fort Carson opened a sustainable training facility in December, a significant first step in demonstrating how sustainable design can be integrated into future construction projects and renovations.

Sustainable design involves such efforts as increasing energy efficiency; using renewable, cleaner energy sources (e.g., solar, wind, geothermal); constructing with recycled materials and building facilities that take advantage of the natural environment.

Before the training facility could be built, the Directorate of Environmental Compliance and Management had to overcome misconceptions, obtain funding and begin convincing leadership of the need to design a facility integrated with sustainable concepts.

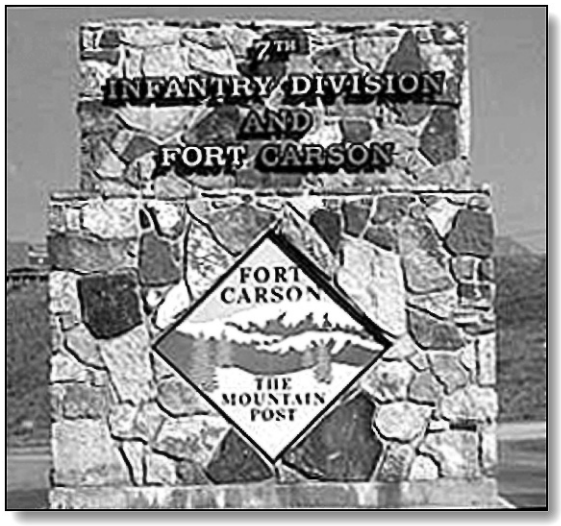
A "green building" team was formed in 2001 to set the standards and ensure the success of integrating sustainable concepts into a Fort Carson training facility funded for construction in 2002. The project provided an opportunity for the installation and U.S. Army Forces Command to implement their desire for such a facility and to test the Sustainable Project Rating Tool, or SPiRiT, on a local level. A building was developed from the ground up with a limited budget of $560,000 to demonstrate that sustainable concepts are easy to implement and that costs are comparable to a traditionally constructed facility of equal design.

The new building was completed in November 2002. The facility contains 2,800 square feet, which includes a training room that can hold up to 70 occupants, a state-of-the-art audiovisual system, restroom facilities, a lobby, storage area and a small office.

To promote and capture how "green" a facility is, the Army adopted SPiRiT. This program assigns points for meeting certain goals in different areas, such as energy efficiency, air quality and water efficiency. The Army goal is for every facility to meet at minimum a bronze standard. Fort Carson decided it was not cost effective to officially certify its low-budget project. By its own count, however, Fort Carson determined its facility achieved 48 points or the Silver standard. The point levels of the SPiRiT program are:

Bronze:	(25-34)
Silver:	(35-49)
Gold:	(50-74)
Platinum:	(75-100)

During the design of the building, many concepts were evaluated for cost and applicability. Some of the concepts and equipment integrated into the design and construction included:



ENERGY-EFFICIENT ELEMENTS

- Use of natural day lighting and high-efficiency windows reduces energy use for heating and cooling. Building orientation takes advantage of southern and western exposure. Proper orientation alone can save a building 20 to 40 percent in heating and lighting costs.
- High-efficiency, low-emissivity windows are equipped with a coating to allow visible light through but selectively block infrared radiation (heat). That means heat has a harder time escaping on cold days and entering on hot days, which boosts insulation efficiency.
- Natural cooling cupola that uses louvers and fans to force hot air up and out, eliminating the need for traditional air conditioning.
- Insulation exceeding local standards (over R-30 roof value and R-20 exterior wall value).
- Low hot water demand allows for usage of electric instantaneous water heaters for all sinks. There was no need for a hot water heater or associated piping during construction of the facility.
- An extremely efficient Energy Star (an Environmental Protection Agency energy efficiency program) two-stage natural gas furnace.
- Energy Star-compliant Light Emitting Diode exit signs.
- Exterior security light triggered by photovoltaic cell.
- Motion sensors shut off lighting in unoccupied areas.

Low Water Usage

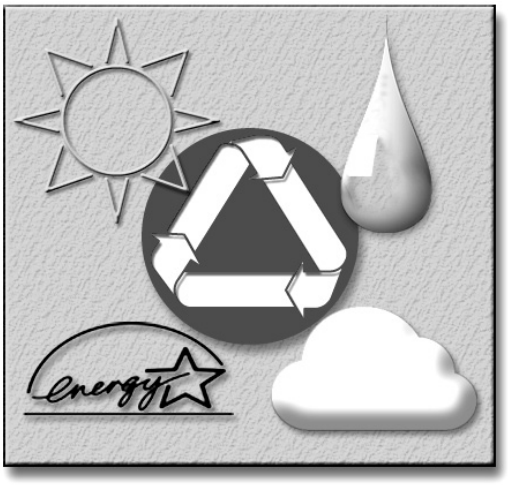
- Low-flow toilets use less than 1.6 gallons per flush and urinals use less than 1 gallon per flush.
- Metered faucets reduce water usage.
- A xeriscaping plan was completed to use little or no water for drought-tolerant landscaping.

Improved Air Quality

- Interior paint contains no solvents or VOCs (volatile organic compounds).
- Sub-slab vent system captures and releases potential harmful gases such as Radon.
- Interior doors are not stained, which eliminates unnecessary chemical usage and emissions.

Recycled Construction Materials

Most of the construction products contain significant percentages of recycled content materials or re-use waste products.



- Toilet partitions are 80 to 90 percent recycled steel.
- Concrete foundation and slab contains 20 percent fly ash (waste product from coal combustion).
- Parking lot is made from five percent recycled content asphalt and 100 percent recycled content plastic parking stops.
- Ceiling tiles are 50 to 79 percent recycled content (made from phone books).
- Sustainably harvested Oriented Strand Board was used as roof sheathing.

Reuse of Materials

Some of the construction items and office products were obtained from Fort Carson demolition or renovation projects.

- Handrails and paper towel dispensers in bathrooms were taken from a demolished facility.
- Student chairs were obtained from Defense Reutilization and Marketing Office.

Furniture and Equipment

Many of the items are either energy efficient or made from recycled materials.

- Picnic tables are 100 percent recycled content plastic.
- Computer equipment is Energy Star compliant.
- Bike rack is made from 30 to 100 percent recycled steel.
- Solar walkway lights do not use any electrical grid power.

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CLEARANCE PRIORITIES

(Continued from page 5)

c) How about the stakeholders? They work and live there, and are being impacted financially, physically (lost use of the land) and even mentally, knowing they are working or living near areas with potential OE hazards.

Facing the above questions and dilemmas, USACE and CDPHE project managers decided that, since their major concern - the immediate health and safety of the public – had been addressed, they had no preference for which AOCs were cleared first, as long as it was operationally efficient. The answer became obvious: let the public – those people working and living on the range who are most impacted by the presence of OE – determine the priorities.

THE PRIORITIZATION PROCESS

The process described below was developed by USACE (Omaha District) and CDPHE project managers to address the situation described above, which is, in short, that the development of the range is expected to occur before the OE response activities at the site are completed. Thus, the public is impacted, and they should be invited to help determine cleanup priorities.

The project managers recognize they are ultimately responsible for directing the clearance activities. Thus, the prioritization process provides guidance – not direction – as it may be necessary at any time during the project to redirect priorities due to outside factors. The project managers are committed to following the priorities established in this process and to keeping the public informed when they need to deviate from them.

A RAB meeting was held in July 2000 at which the attendees engaged in a facilitated brainstorming session to develop criteria for prioritizing areas. Initially, 30 possible criteria were generated. These criteria were then discussed, and similar criteria were combined. As a result, the 30 criteria were reduced to 10:

- Access
- Cost
- Current Land Use
- Economic Impact
- Environmental Impact
- Future Land Use
- Overall Hazard
- Infrastructure
- Legal Restrictions
- Type of Hazard

Next, the RAB used a multi-voting technique to select the most important criteria. Each RAB member was given three votes of varying magnitude: a first-place vote worth five points, a second-place vote worth three points and a third-place vote worth one point. RAB members then ranked the 10 criteria with their three votes. The total points given to each of the criteria were then tallied and a weighting factor was calculated for each criterion by dividing the total number of votes received by the total number of votes cast.

In the next step of the process, USACE and CDPHE project managers evaluated each of the 12 known AOCs against the 10 criteria above. Each AOC was given preliminary raw scores from 0 to 100 for each criterion. The raw scores were assigned using professional judgment to balance the components of each criterion. For example, when assigning the Overall Hazard scores, AOCs in

TABLE 1. AREAS of CONCERN PRIORITIZATION

AREA OF CONCERN	PRIORITY	SCORE
1. Bombing Target 6	1	92.2
2. Rocket Range	2	87.8
3. Jeep/Demo Range	3	85.3
4. Air-to-Ground Gunnery Range	4	82.4
5. Mortar Range	5	72.4
6. Area B	6	67.9
7. Bombing Target 2	6	67.9
8. Mortar Range	8	55.5
9. Area B	9	52.3
10. Bombing Target 2	10	51.8
11. Area B	10	51.8
12. Mortar Range	12	34.8

close proximity to schools or where a high number of people might be exposed, were given higher scores than AOCs presenting similar hazards away from schools and people.

The raw scores were multiplied by the weighting factors, then added to obtain a total score for each AOC. As indicated by Table 1, four of the 10 criteria received no votes. Therefore, no weight was given to these four criteria in the final scoring.

Following USACE and CDPHE project managers' preliminary scoring of the 12 known AOCs, the scoring was presented to the RAB for further discussion. This discussion resulted in a consensus on the scoring and, thus, on the relative prioritization of the 12 AOCs.

During discussions, it also became evident that there is a definite grouping of the AOCs with respect to their scores. The RAB felt that the first four prioritized AOCs – Bombing Target 6, the Rocket Range, the Jeep/Demo Range, and the Air-to-Ground Gunnery Range – were the

highest relative priorities. The second group, in order of priority, consists of the Mortar Range, Area B, and Bombing Target 2. Bombing Targets 3, 7, 5, and 4 make up the third group. Bombing Target 1 is the last relative priority. The RAB, USACE, and the CDPHE concurred that an annual review of these priorities is required to address changing conditions at the site and to ensure their continued validity.

SUMMARY

The authors of this paper believe this prioritization process is a valuable tool that can have numerous positive applications at various sites. The process helped in establishing trust, ownership and buy-in among stakeholders and the public sector.

Public input is invaluable to the success of projects of this nature. This process of inviting public participation – and providing managers and decision-makers concrete guidance on public opinion – is essential. By working collaboratively to accommodate public priorities, solid partnerships can be developed and nurtured, with significant accomplishments achieved in the most efficient manner possible, for the benefit of all.

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REPs for SEPs

Cleaner Air and Water, Courtesy of Polluters

Renewable energy projects can stimulate the economy, help ensure energy security and improve the quality of your air and water. Supplemental environmental projects (SEPs) are a policy vehicle that can provide funding for your renewable energy projects (REPs). In 1999 alone, the federal government negotiated $237 million in supplemental environmental project settlements.

What Are Supplemental Environmental Projects?

When a company violates environmental regulations, it must pay a fine to the state or federal government. The U.S. Environmental Protection Agency (EPA) designed supplemental environmental projects to give violators an alternative to standard fines. Instead of paying the full amount of its fines, the company can volunteer to fund environmentally friendly projects. These projects can provide a positive outcome for the company and the community. Federal law permits all states to incorporate renewable energy into supplemental environmental projects, so communities can enjoy cleaner air and water, courtesy of the polluters.

Diverse Economy

The economic benefits to states implementing renewable energy projects include new revenue and new jobs that often target underdeveloped areas, such as rural communities and Native American reservations. Renewable energy projects also diversify energy portfolios, providing a hedge against future price spikes of traditional fuels.

- Farmers can benefit directly from the use of their land for renewable energy projects. For example, a 20-MW wind facility (which serves approximately 6,000 homes) located on a 1,000-acre farm would provide the farmer with more than $50,000 in additional revenue each year, while using only about 20 acres of the land.
- In Carbon County, Wyo., the Foot Creek Rim Wind Plant will provide enough electricity to power 50,000 average U.S. homes. Even better, property tax revenue from the wind plant provides 30 percent of the county budget – a major economic impact in the community.

Secure Energy

Now more than ever, energy security is in the spotlight. Renewable energy applications address valid concerns about reducing dependence on foreign oil and ensuring the safety of our nation's power plants. During a disaster, solar power can refrigerate vaccines and medical supplies and power communication equipment. Supplemental environmental project dollars can be used to outfit schools with solar power that will provide a learning opportunity for students and a secure, powered base of operations for a community during a disaster.

Healthy Environment

Almost 98 percent of air pollution can be attributed to the production and use of energy. Renewable energy projects can reduce the need for building new fossil-fueled power plants. Supplemental environmental project dollars can fund REPs that have the potential to make an impact on a state's environment and public health. By using one kilowatt of renewable energy, it is possible to avoid annual emissions equal to driving more than 4,000 miles in an average passenger car.

RENEWABLE ENERGY BENEFITS COMMUNITIES

ECONOMIC: Communities in rural Texas are learning about the economic benefits of wind power firsthand. Ranchers in west Texas welcome the revenue from wind projects that is replacing revenue from soon-to-be-depleted oil wells. In fact, the perception of Texas as an oil exporter is being replaced by its new image as a leader in the renewable energy industry. The Lower Colorado River Authority estimates that its wind power project will contribute $300 million to the Texas economy in the next 25 years. Energy revenue is spent in local communities. In addition, building wind power projects can help contribute to a stronger infrastructure of roads and power lines, creating jobs in the process.

Energy Security: Renewable energy not only provides a secure, domestic energy source, but it also has a long history of supplying power during disaster relief efforts. For example, when Hurricane Andrew ravaged Florida, solar power survived the storm and provided lights for several communities until utility power was restored weeks later.

Environment: When a Denver company violated pollution limits in Colorado, company officials worked with the state government to develop an SEP. As a result, the company is purchasing wind energy for at least five years. This project eliminates the need to burn 1,820 tons of coal, improving the state's air quality at a level equal to planting more than 1,000 acres of trees.

In Utah, as part of its settlement with EPA for violations of the Clean Air Act that caused excess emission of NOx and SOx, a company agreed to provide funding for additional wind turbines for the Utah Blue Sky Program. This will allow the program to provide more electricity generated by wind power (green power), thereby reducing emissions by reducing the generation needs from traditional power plants.

If green power is not available in an area, a violator can purchase "green tags." Under a green tag program, the violator will continue to purchase energy from its utility, but it can also purchase green tags from a renewable energy producer. Although the violator may not actually receive and use the power purchased from the green producer, it will receive credit for the environmental benefits of the green power purchase.

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For more information about renewable energy and projects, visit these Web sites:

State Energy Alternatives
www.eren.doe.gov/state_energy/

Wind Powering America
www.eren.doe.gov/windpoweringamerica/

Green Power Network
www.eren.doe.gov/greenpower/

Produced by the National Renewable Energy Laboratory, a DOE national laboratory

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UXO CLEANUP

(Continued from page 3)

To help in meeting this need, the Interstate Technology and Regulatory Council (ITRC), a state-led coalition, was formed in 1999 at the request of state regulators and community stakeholders. Its primary mission is to assist in broadening the technical knowledge, reduce barriers to regulatory acceptance of new environmental technology, and provide a neutral forum for exchanging ideas involving innovative OE/UXO technologies.

The ITRC organization consists of 40 member states. Collectively, the ITRC develops guidance documents and training courses (e.g., UXO Basic/Advanced Training) to meet the needs of regulators, environmental consultants, Defense Department environmental program managers involved in UXO cleanup efforts, industrial consultants and community stakeholders. Additionally, the organization works with state representatives to ensure that the ITRC products and services have maximum impact among state environmental agencies and technology users.

A two-and-a-half day UXO basic training course has been designed by the ITRC, focused primarily on establishing a basic level of understanding and familiarizing attendees with terminology, OE/UXO identification, safety concerns, regulatory requirements, conventional and innovated technologies, site investigations and remediation. The course addresses issues relevant to state regulators, federal environmental program managers, industrial consultants and community stakeholders.

Instructors involved in the UXO training consist of a collage of government and private sector or consultant organizations to offer concrete technical information and experiences consisting of the following:

- State environmental regulatory agencies
- Federal environmental agencies
- U.S. Army Corps of Engineers
- Private consulting organizations actively involved with UXO cleanup activities.

Serving as a unique catalyst for dialogue between regulators and the regulated community, the ITRC formulated a work team, whose tasks consist of the following elements within their assigned formula for operation:

- Maintain multi-state collaboration
- Provide full federal partner support
- Encourage industry sponsorship
- Enhance tribal and community stakeholder participation
- Ensure frequent communication among team members
- Produce useful products each year.

This basic training course has grown in popularity. As former impact areas are forced to be cleared, cleaned and transferred to regional land use developers, the mechanics and methods involved in making these sites safe for newly designated uses must be taught. One important objective is to determine, identify and agree upon the end use of each piece of real estate to be cleaned and turned over for private development. Interested candidates may visit www.itrc.org to stay apprised of future course availability (basic and advanced).

The Topographic Engineering Center (TEC) of the U.S. Army Corps of Engineers has historical geographic information system-based photographic analysis available for many installations and facilities. These data enable one to view landscape prior to land cover or land use change, to help identify potential UXO sites. For more information, contact Glenn Frano, TEC, at (703) 428-8351, or glenn.k.frano@erdc.usace.army.mil.

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